

REMARKS

By this amendment, claims 1, 10, 13-15, 45, 49, 50 and 52 have been amended and claim 51 has been cancelled. Accordingly, claims 1, 2, 4, 6-15, 39-50, and 52 are pending in the present application. The claim amendments are supported by the specification, the accompanying figures, and the claims as originally filed, with no new matter being added. In particular, support for the amendments can be found at page 15, lines 13-16 of the application as filed. Additionally, the amendments to claims 10 and 13-15, "~~substrate~~sheet," to claims 1, 10, 13-15, 45, 49, 50, and 52, "~~electric~~electrical apparatus," and to various other claims, *e.g.* "~~asaid~~," correct minor typographical errors and do not affect the patentability of the claims or narrow their scope. Accordingly, favorable reconsideration of the pending claims is respectfully requested.

1. Formal Rejections Under 35 U.S.C. § 112 and Objections Under 37 C.F.R. § 1.83(a)

Claims 49 and 52 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More particularly, the Office Action states that it is unclear what the limitations "control module" and "electronic game assembly" represent.

Similarly, claims 49, 50, and 52 have been rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, the Office Action states that the original specification does not appear to have support for an "electric apparatus selected from the group consisting of a computer, a program logic controller, an electronic game assembly, a controlling module, and a testing apparatus."

Finally, the drawings have been objected to under 37 C.F.R. § 1.83(a) as not showing every feature recited in the claims. The Office Action therefore indicates that the features of a computer, a program logic controller, an electronic game assembly, a controlling module, and a testing apparatus must be shown in the drawings or the features must be cancelled from the claims. To each of these foregoing rejections and objection, applicants respectfully traverse.

For support for the presently recited limitations “a computer, a program logic controller, an electronic game assembly, a controlling module, and a testing apparatus,” Applicant directs the Examiner to the application as filed at page 15, lines 13-22:

With reference now to **Figure 9**, interposer 12 having semiconductive devices 16 electrically coupled thereto through the use of connectors 14, 56 is electrically coupled to an **electrical apparatus 70** such as a testing apparatus shown in a diagrammatic view in Figure 9. Interposer 12 may be permanently or removably coupled to apparatus 70.

As used throughout this specification and the appended claims, **the term “electrical apparatus” refers to an apparatus which electrically couples to a semiconductive device. Examples of such apparatuses include a computer, program logic controller, electronic game assembly, a controlling module, and a testing apparatus which monitors, tests, or evaluates a semiconductive device.** The testing apparatus may be a computerized testing apparatus, for example.

(emphasis added). Thus, the specification provide explicit support for “an electrical apparatus comprising, for example, a computer, program logic controller, electronic game assembly, a controlling module, or a testing apparatus which monitors, tests, or evaluates a semiconductive device.” In addition, these structures are diagrammatically shown in Figure 9 as electrical apparatus 70.

Accordingly, the Applicant respectfully asserts: (1) claims 49 and 52 are not indefinite under 35 U.S.C. § 112, second paragraph, because page 15, lines 13-22 and Figure 9 of the application as

filed make it is clear what the “control module” and electronic game assembly” represent; (2) for the same reasons, the subject matter of claims 49, 50, and 52 is reasonably conveyed to one skilled in the art sufficient to convey that the inventor, at the time the application was filed, had possession of the claimed invention; and (3) the features of a computer, a program logic controller, an electronic game assembly, a controlling module, and a testing apparatus are shown in the drawings collectively as electrical apparatus 70. Accordingly, the prompt removal of the foregoing rejections and objection are respectfully requested.

2. Rejections Under 35 U.S.C. § 103

Claims 1, 2, 4, 6-15, and 39-48 and 51 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,424,652 to Hembree et al. (hereinafter “*Hembree*”) in view of U.S. Patent No. 4, 712,161 to Pryor et al. (hereinafter “*Pryor*”), and U.S. Patent No. 5,621,333 to Long et al. (hereinafter “*Long*”) for the reasons set forth on pages 2-3 of the Office Action. Applicants respectfully traverse.

As indicated in Applicant’s prior response, Applicant believes that *Hembree* discloses a substrate insert 14 and housing 10 that collectively comprise an interposer that is analogous to the presently claimed interposer. Nevertheless, the Office Action suggests that substrate insert 14 is analogous to the presently claimed interposer and housing 10 is part of an electric apparatus that is analogous to the presently recited “electrical apparatus.” Regardless of which interpretation is adopted by the Examiner, however, the Applicant believes the present claims are patentable over the cited references.

Initially, independent claims 1, 10, 13-15, 45, and 52 have been amended to recite: “wherein the substrate is configured for removable coupling with the electric apparatus.” Support for this

amendment can be found at page 15, line 13-16 of the application as filed. Thus, in these recited embodiments of the invention, the substrate, and hence the entire interposer, can be removed from (and re-coupled to) the electrical apparatus if desired without destroying the device.

Assuming, *arguendo*, that *Hembree*'s insert 14 is an interposer analogous to the interposer recited in the present claims, it is nevertheless a more complex structure (and requires more complex additional structures) than is recited in the present claims. For example, the insert 14 is not removably coupled to housing 10 because wire bonds 26 are permanent, not removable, structures. Removing insert 14 from the housing would break the wire bonds and thus destroy the device and make it inoperable for its intended function. Such an attachment of the insert to the housing via wire bonds also does not "structurally support[] said substrate with said terminal end in electrical contact with said electric apparatus," as is recited in present claims 1, 10, 13-15, and 45, with language variations in each claim.

In the event that the Examiner adopts Applicant's interpretation that substrate insert 14 and housing 10 collectively comprise an interposer that is analogous to presently claimed interposer, it is clear that because the die 24 sits on the substrate insert 14 within a well formed by the housing 10, the die in fact sits inside the interposer. Hence, in this interpretation of *Hembree*, *Hembree* cannot teach or suggest that the die (semiconductive device) is "unimbedded into said substrate [or sheet]," as is presently recited in each independent claim. Substrate insert 14 and housing 10 also do not disclose the interposers recited in present claims 1, 42-44, and 52, which include both receiving and terminal ends of an electrical conductor on the planar surface of a substrate or sheet. The receiving ends (contacts 20) and terminal ends (leads 28) of *Hembree* are clearly not on the same planar surface of a substrate or sheet.

Neither *Pryor* nor *Long* overcome the above shortcomings of *Hembree*. Applicant therefore

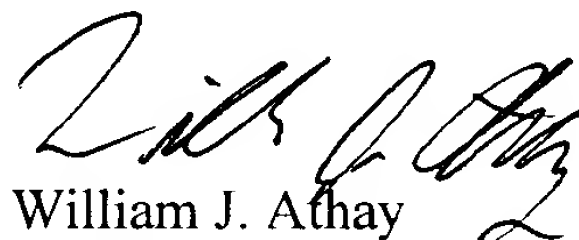
respectfully asserts that the presently pending claims 1, 2, 4, 6-15, and 39-48 and 51 are patentable over the cited references. Applicants therefore respectfully request that the rejections of the claims under 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

In view of the foregoing, Applicants respectfully request favorable reconsideration and allowance of the present claims. In the event the Examiner finds any remaining impediment to the prompt allowance of this application that could be clarified by a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney.

Dated this 18th day of March 2002.

Respectfully submitted,



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